

WHAT IS CLAIMED IS:

1. An information processing apparatus  
comprising:

- a) input means for inputting information data;
- 5        b) generation means for generating security data  
to be used to protect the information data;
- c) encoding means for encoding the information  
data to generate encoded data;
- 10       d) extraction means for extracting a unique  
predetermined code indicating a specific meaning from  
encoded data within a security section in accordance  
with the security data;
- e) superimposing means for superimposing the  
security data on the predetermined code;
- 15       f) scrambling means for scrambling the encoded  
data except for the predetermined code within the  
security section; and
- g) output means for outputting the predetermined  
code processed by said superimposing means and the  
20       encoded data processed by said scrambling means.

2. An apparatus according to claim 1, wherein the  
security data contains key information to be used by  
said scrambling means.

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3. An apparatus according to claim 1, wherein the  
security data contains information for an

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authentication process.

4. An apparatus according to claim 1, wherein the  
information data is image data, and said encoding means  
5 generates an MPEG-4 bitstream.

5. An apparatus according to claim 4, further  
comprising IPMP encoding means for generating IPMP data  
indicating information that pertains to the security,  
10 and wherein said output means outputs the IPMP data  
generated by said IPMP encoding means.

6. An apparatus according to claim 1, further  
comprising enciphering means for enciphering the  
15 security data, and wherein said superimposing means  
superimposes the security data enciphered by said  
enciphering means.

7. An apparatus according to claim 1, wherein the  
20 predetermined code to be extracted by said extraction  
means is a start code.

8. An information processing apparatus  
comprising:

25 a) input means for inputting encoded data in  
which security data is adaptively superimposed on a  
unique predetermined code in the encoded data, which

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indicates a specific meaning, and the encoded data except for the predetermined code is adaptively scrambled in accordance with the security data;

b) code extraction means for extracting from the  
5 encoded data a code which is located at a position where the predetermined code is present;

c) detection means for detecting the security data from the extracted code;

d) descrambling means for descrambling the  
10 encoded data in accordance with a detection result of said detection means; and

e) decoding means for decoding image encoded data descrambled by said descrambling means.

9. An apparatus according to claim 8, wherein the  
15 security data contains authentication data to be used to check authenticity, and said apparatus further comprises authentication means for checking authenticity.

20 10. An apparatus according to claim 8, wherein said descrambling means descrambles scrambled encoded data in accordance with a checking result of said authentication means.

25 11. An apparatus according to claim 1, wherein the security data is enciphered data, and said apparatus

further comprises deciphering means for deciphering the enciphered security data.

12. An apparatus according to claim 8, wherein the  
5 encoded data is MPEG-4 bitstream data.

13. An apparatus according to claim 12, wherein  
said input means inputs IPMP data indicating  
information which pertains to security.  
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14. An apparatus according to claim 13, wherein  
the IPMP data contains authentication data to be used  
to check authenticity, and said apparatus further  
comprises authentication means for checking  
15 authenticity in accordance with the authentication  
data.

15. An apparatus according to claim 14, wherein  
said descrambling means descrambles scrambled encoded  
20 data in accordance with a checking result of said  
authentication means.

16. An apparatus according to claim 15, wherein  
the security data is enciphered data, and said  
25 apparatus further comprises deciphering means for  
deciphering the enciphered security data.

17. An apparatus according to claim 8, wherein the predetermined code is a start code.

18. An information processing method comprising  
5 the steps of:
- a) inputting information data;
  - b) generating security data to be used to protect  
the information data;
  - c) encoding the information data to generate  
10 encoded data;
  - d) extracting a unique predetermined code  
indicating a specific meaning from encoded data within  
a security section in accordance with the security  
data;
  - 15 e) superimposing the security data on the  
predetermined code;
  - f) scrambling the encoded data except for the  
predetermined code within the security section; and
  - g) outputting the superimposed predetermined code  
20 and the scrambled encoded data.

19. A method according to claim 18, wherein the security data contains key information to be used in said scrambling step.

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20. A method according to claim 18, wherein the security data contains information for an

authentication process.

21. A method according to claim 18, wherein said  
encoding step includes a step of generating an MPEG-4  
5 bitstream.

22. A method according to claim 21, further  
comprising an IPMP encoding step of generating IPMP  
data indicating information that pertains to the  
10 security, and wherein said output step includes a step  
of outputting the IPMP data generated in the IPMP  
encoding step.

23. A method according to claim 18, further  
15 comprising an enciphering step of enciphering the  
security data, and wherein said superimposing step  
includes a step of superimposing the security data  
enciphered in said enciphering step.

24. A method according to claim 18, wherein the  
20 predetermined code to be extracted in said extraction  
step is a start code.

25. An information processing method comprising  
the steps of:

a) inputting encoded data in which security data  
is adaptively superimposed on a unique predetermined

code in the encoded data, which indicates a specific meaning, and the encoded data except for the predetermined code is adaptively scrambled in accordance with the security data;

5           b) extracting from the encoded data a code which is located at a position where the predetermined code is present;

          c) detecting the security data from the extracted code;

10           d) descrambling the encoded data in accordance with the detection result; and

          e) decoding the descrambled image encoded data.

26. A method according to claim 25, wherein the  
15 security data contains authentication data to be used to check authenticity, and said method further comprises an authentication step of checking authenticity.

20           27. A method according to claim 26, wherein said descrambling step includes a step of descrambling scrambled encoded data in accordance with a checking result in said authentication step.

25           28. A method according to claim 25, wherein the security data is enciphered data, and said method further comprises a deciphering step of deciphering the

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enciphered security data.

29. A method according to claim 25, wherein the encoded data is MPEG-4 bitstream data.

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30. A method according to claim 29, wherein said input step includes a step of inputting IPMP data indicating information which pertains to security.

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31. A method according to claim 30, wherein the IPMP data contains authentication data to be used to check authenticity, and said method further comprises an authentication step of checking authenticity in accordance with the authentication data.

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32. A method according to claim 31, wherein said descrambling step includes a step of descrambling scrambled encoded data in accordance with a checking result in said authentication step.

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33. A method according to claim 31, wherein the security data is enciphered data, and said method further comprises a deciphering step of deciphering the enciphered security data.

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34. A method according to claim 25, wherein the predetermined code is a start code.



35. An information processing method comprising the steps of:

a) inputting image encoded data that forms a hierarchical structure;

5           b) extracting a predetermined code indicating a head of a predetermined layer from the image encoded data; and

          c) superimposing security data for image protection onto the predetermined code extracted in said extraction step.

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36. A method according to claim 35, further comprising an enciphering step of enciphering the image encoded data in accordance with the security data.

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37. An information processing method comprising the steps of:

a) inputting encoded data in which security data is superimposed on a predetermined code indicating a head of a predetermined layer of image encoded data that forms a hierarchical structure;

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b) extracting from the encoded data a code which is located at a position where the predetermined code is present;

25           c) detecting the security data from the extracted code; and

d) decoding the encoded data in accordance with a

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detection result.

38. A method according to claim 37, wherein the  
encoded data is enciphered data, and said decoding step  
5 includes a step of deciphering the enciphered encoded  
data.

39. A computer readable storage medium which  
stores a control program that implements an image  
10 processing method cited in claim 18.

40. A computer readable storage medium which  
stores a control program that implements an image  
15 processing method cited in claim 25.

41. A computer readable storage medium which  
stores a control program that implements an image  
processing method cited in claim 35.

42. A computer readable storage medium which  
stores a control program that implements an image  
20 processing method cited in claim 37.